IN2

ASSESSEMENT OF THE ADDITIONAL COST OF DROTRECOGIN ALFA (ACTIVATED) RELATIVE TO STANDARD CARE IN THE TREATMENT OF SEVERE SEPSIS IN A MULTICENTIC OBSERVATIONAL STUDY IN FRANCE

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OBJECTIVES: To compare, in daily practice, the resource consumption in the treatment of severe sepsis with multiple organ failures, using either standard care alone or with drotrecogin alfa (DA). **METHODS:** A pre-post study was conducted between September 2002 and February 2005, before and after DA's market introduction. Selection bias was taken into account using an optimal propensity score (PS) matching. Logistic regression was used for the PS, missing values were handled using multiple imputation. The medical procedures' burden was assessed using relative cost index (ICR) points. Acquisition costs, national tariffs and a regression equation were used for drugs, transfusions and hospital costs respectively. Cost comparisons were made using 3 tests (Wilcoxon, lognormal t-test and bootstrap). **RESULTS:** 1096 patients were included in the study and the PS matching procedure retained 840 of them. DA treated patients received more technical medical procedures ($p = 0.0013$). They also had an increased length of stay in intensive care units (24.4 days against 21.3 days—$p = 0.0018$) and higher drug prescription costs (€2004 1,773.16 in the before versus €2004 9,139.61 in the after phase), DA's costs included ($p < 0.0001$). Moreover, the anti-infective drugs and corticosteroid costs were significantly higher for DA treated patients ($p < 0.0001$ for both) and costs linked to transfusions were higher (€2004 1,042.95 against €2004—$p = 0.0060$), essentially due to a higher consumption of packed red blood cells and fresh frozen plasma in the after phase. The overall hospitalization costs reached €2004 36,718.39 in the before and €2004 48,510.11 per patient in the after phase ($p < 0.0001$). **CONCLUSIONS:** PS matching ensures less biased cost comparisons. The additional cost linked to DA prescription is not reducible to its price. DA treated patients will also have more technical medical procedures, an increased length of stay and drug consumption as well as more transfusions.

IN3

COST-EFFECTIVENESS OF VORICONAZOLE VERSUS LIPOSOMAL AMPHOTERICIN B FOR INVASIVE ASPERGILLOSIS INFECTION IN THE UK

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Voriconazole (VOR), a triazole antifungal, has been shown to provide a superior clinical response and a survival benefit compared with conventional amphotericin B (CAB) as initial therapy for proven or probable invasive aspergillosis (IA). Liposomal amphotericin B (L-AmB), is used to achieve the therapeutic effect of CAB while minimizing renal toxicity. **OBJECTIVE:** To compare the cost-effectiveness of VOR versus L-AmB as initial therapy for IA. **METHODS:** The cost-effectiveness of VOR versus L-AmB was assessed through a decision-analytic model in terms of cost per success and per survival. Economic and clinical data for VOR and CAB were obtained from a large clinical trial comparing the two treatments over 12 weeks (Herbrecht et al, NEJM 2002). Data for CAB were modified to reflect the lower toxicity and better outcomes of L-AmB using a published meta-analysis. 12-week results were extrapolated over lifetime using Markov cycles. The impact of uncertainty in input parameters was evaluated by means of probabilistic sensitivity analysis. **RESULTS:** Expected average health care costs were £27,165 (95% uncertainty distribution, £20,532–£34.071) for VOR and £33,113 (£26,703–£40,136) for L-AmB at 12 weeks and £32,949 (£26,025–£41,216) and £45,552 (£38,005–£60,897) over the lifetime for the two treatments, respectively. Mean survival was 174 life-weeks (160–190) for VOR and 128 life-weeks (111–147) for L-AmB. Voriconazole was expected to be dominant to L-AmB, (greater effectiveness and less costly) in terms of success at 12 weeks, survival at 12 weeks, and life-weeks gained (probability >80%). Using different unit costs and different source data for efficacy of L-Amb, VOR remained cost-effective. **CONCLUSIONS:** This economic evaluation suggests that voriconazole is cost saving with better predicted outcomes and therefore a dominant cost-effective treatment of IA compared with L-AmB in the UK.

IN4

LOWERING THE AGE THRESHOLD FOR ROUTINE INFLUENZA VACCINATION: AN ECONOMIC EVALUATION FOR FOUR EUROPEAN COUNTRIES

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INTRODUCTION: Routine influenza vaccination is fully reimbursed in most European countries for people aged over 65 years and those at high risk of complications. Lowering the age threshold for routine vaccination would reduce hospitalisations and deaths, as well as productivity losses during influenza outbreaks. We performed an economic evaluation of lowering the current age thresholds of 59 in Germany, and 64 in France, Italy, and Spain to age 50 in these countries. **METHODS:** A decision analytic model was developed comparing a new policy providing universal reimbursement with current policy covering only those at high risk of complications in the 50–59/64 age group. We analysed costs and outcomes one over one influenza season from the perspectives of third-party payers (TPP) and society. The primary effectiveness measure was quality-adjusted life-years (QALYs). Model inputs were obtained from the published literature, complemented by expert opinion. Deterministic and probabilistic sensitivity analyses (PSA) were conducted. The value of acquiring additional information was explored. **RESULTS:** The estimated ICERs ranged from €13,156 to €28,568 per QALY gained from the TPP perspective. At a threshold of €50,000 per QALY gained, the probabilities of the new policy being cost-effective would be 93% for France, 72% for Germany, 89% for Italy, and 95% for Spain. From the societal perspective, the cost per QALY decreased to €9,318 in France and €4,195 in Spain, while cost savings are predicted for Germany and Italy. The greatest sources of uncertainty were ILI incidence rate, vaccine uptake, fatality rate and costs of vaccination. **CONCLUSIONS:** Routine influenza vaccination for people over 50 is likely to be cost-effective in France, Germany, Italy and Spain, and cost-saving from the societal perspective in Germany and Italy. The scope to reduce decision uncertainty is limited, as much of this stems from the unpredictable fluctuation in annual ILI incidence rate.